



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,973	07/30/2003	Michael J. Matussek	OTD-030256-US	9518

7590 06/24/2005

Michael P. Hartmann
 Cooper Cameron Corporation
 P.O. Box 1212
 Houston, TX 77251-1212

EXAMINER

GAY, JENNIFER HAWKINS

ART UNIT	PAPER NUMBER
----------	--------------

3672

DATE MAILED: 06/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/629,973	Applicant(s) MATUSEK ET AL.	
	Examiner Jennifer H. Gay	Art Unit 3672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 12-18 is/are rejected.
- 7) ☒ Claim(s) 6-11 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/30/03</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because the abstract includes the implied phrase "is disclosed". Correction is required. See MPEP § 608.01(b).
2. Applicant is reminded of the proper language and format for an abstract of the disclosure.
The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 100. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

4. Claims 1-18 are objected to because of the following informalities:

- Claim 1, there is a lack of antecedent basis for “the drill pipe string” in line 3 of the claim.
- Claim 1, “a string of drill pipe” in lines 4 and 6 should be changed to --the string of drill pipe-- or amended to indicate that there is more than one string of drill pipe.
- Claim 1, “a casing hanger” in line 10 should be changed to --the casing hanger--.
- Claim 1, “a seal assembly” in line 12 should be changed to --the seal assembly--.
- Claim 1, --is-- should be added after “said shuttle piston” in line 13.
- Claim 1, “a wellhead” in lines 14 and 15 should be changed to --the wellhead--.
- Claim 2, “a seal assembly” in line 6 should be changed to --the seal assembly--.
- Claim 9, “a seal assembly” in line 5 should be changed to --the seal assembly--.
- Claim 12, “a casing hanger” in line 11 should be changed to --the casing hanger--.
- Claim 15 should be amended as follows as it is currently difficult to read and understand; --said plurality of latching dogs, positioned circumferentially on said lower body of said tool body for releasably connecting said tool body to said casing hanger, are urged into engagement with said casing hanger by axial movement of a latching ring positioned on said mandrel when said mandrel is axially moved relative to said lower body.--.

The informalities listed above are merely examples of the errors found in the claims; claims are replete with such errors. All of the claims should be reviewed and the appropriate corrections made.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Wightman et al. (US 4,712,621).

Regarding claim 1: Wightman et al. discloses an installation tool for landing a casing hanger **95** in a wellhead **123** and setting a seal assembly **77** in the annulus between the hanger and the wellhead without requiring rotation of a drill string (8:60-65). The tool includes the following features:

- A mandrel **19** having an upper end adapted for connection to the string of drill pipe and a bore therethrough.
- A tool body **13** having a lower end connected to a drill string. The tool body is carried by the mandrel and the body is axially movable relative to the mandrel (2:50-63).
- A plurality of connection means **91** positioned on the body for releasably connecting the body to the casing hanger.
- A plurality of connection means **81** positioned on the body for releasably connecting the body to the seal assembly.
- A pressure responsive shuttle piston **71** on the mandrel. The piston is axially movable to urge the seal assembly into the annulus between the casing hanger and the wellhead.
- A valve means **41** positioned in the mandrel bore and operable between open and closed positions by axial movement of the mandrel relative to the body.

Regarding claim 2: The body includes a main body **65a**, an upper body **13a**, and a lower body **65**. The main body includes the connection means connecting the tool body and the seal assembly.

Art Unit: 3672

Regarding claim 3: The lower body includes the connection means connecting the tool body and the casing hanger.

Regarding claim 4: The upper body includes a frangible connection means (not shown, the upper body is indirectly secured to the piston via the valve means) securing the upper body to the piston prior to the seal assembly being urged into the annulus between the casing hanger and the wellhead.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wightman et al.

Wightman et al. further discloses that the piston includes a plurality of actuator rods 73 secured to an actuator rod head. Wightman et al. fails to disclose that the head is secured to the piston via a frangible connection means.

However, it would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the piston and actuator rod head of Wightman et al. such that the head was secured to the piston via a frangible connection means in order to have provided a means for securing the rods in an unactuated position until a predetermined condition indicative of the actuation of the tool has been reached. This would have prevented premature actuation of the seal assembly and piston.

9. Claims 12-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wightman et al. in view of Barlett et al. (US 2002/0189813).

Regarding claim 12: Wightman et al. discloses an installation tool for landing a casing hanger 95 in a wellhead 123 and setting a seal assembly 77 in the annulus between the hanger and the wellhead without requiring rotation of a drill string (8:60-65). The tool includes the following features:

Art Unit: 3672

- A mandrel **19** having an upper end adapted for connection to the string of drill pipe and a bore therethrough.
- A tool body **13** having a lower end connected to a drill string. The body includes a main body **65a**, an upper body **13a**, and a lower body **65**. The tool body is carried by the mandrel and the body is axially movable relative to the mandrel (2:50-63).
- A plurality of latching dogs **91** positioned on the lower body for releasably connecting the body to the casing hanger.
- A plurality of latching segments **81** positioned on the lower body for releasably connecting the body to the seal assembly.
- A pressure responsive shuttle piston **71** on the mandrel. The piston is axially movable to urge the seal assembly into the annulus between the casing hanger and the wellhead.
- A valve means **41** positioned in the mandrel bore and operable between open and closed positions by axial movement of the mandrel relative to the body.

Wightman et al. discloses all of the limitations of the above claims except for the valve being a ball valve.

Bartlett et al. discloses a casing hanger assembly. Bartlett et al. further teaches that a sleeve valve, such as that taught by Wightman et al., known to be a functional equivalent to a ball valve (paragraph 52).

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the tool of Wightman et al. to use a ball valve instead of a sleeve valve since the examiner takes Official Notice of the equivalence of a sleeve valve and ball valve for their use in the casing hanger installation art and the selection of any of these known equivalents would be within the level of ordinary skill in the art.

Regarding claim 13: The upper body includes a plurality of tensile bolts (not shown, the upper body is indirectly secured to the piston via the valve means) securing

the upper body to the piston prior to the seal assembly being urged into the annulus between the casing hanger and the wellhead.

Regarding claim 14: Wightman et al. further discloses that the piston includes a plurality of actuator rods 73 secured to an actuator rod head. Wightman et al. fails to disclose that the head is secured to the piston via a frangible connection means.

However, it would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the piston and actuator rod head of Wightman et al. such that the head was secured to the piston via a frangible connection means in order to have provided a means for securing the rods in an unactuated position until a predetermined condition indicative of the actuation of the tool has been reached. This would have prevented premature actuation of the seal assembly and piston.

Regarding claim 15: The latching dogs are circumferentially spaced on the lower body and are positioned to be urged into engagement with the casing hanger by the axial movement of a latch ring 97 positioned on the mandrel.

Regarding claim 16: The body and piston include a plurality of flow return passages 87 (6:44-50). The passages cooperated with flow return passages in the casing hanger (not shown) to allow cementing of the casing string prior to urging the seal assembly into the annulus.

Regarding claim 17: The lower body would include a ball pin for operating the ball valve if a ball valve was used in place of the sleeve valve.

Regarding claim 18: The latching segments are released from the seal assembly by pressure applied in the bore of the mandrel, which shifts the piston relative to the body.

Allowable Subject Matter

10. Claims 6-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 3672

Conclusion

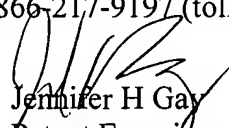
11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

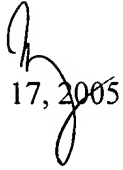
The remaining references made of record disclose various wellbore casing and tubing hanger systems.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer H. Gay whose telephone number is (571) 272-7029. The examiner can normally be reached on Monday-Thursday, 6:30-4:00 and Friday, 6:30-1:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on (571) 272-6999. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jennifer H Gay
Patent Examiner
Art Unit 3672

JHG 
June 17, 2005